

GLOBAL MEET ON CLIMATE CHANGES AND SUSTAINABILITY



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Bioaccumulation capacity of heavy metals in water, sediment and ichthy of auna from the predeltaic area of the lower Danube, Romania

Abstract: Considering the importance of updating water quality monitoring on the Danube River basin, a holistic approach was considered of interest by measuring some physical-chemical quality indicators in the pre-deltaic area, the confluence region between the rivers Siret, Prut and Danube which acquires special importance, especially since the Danube water in this area is the main source of water supply. Thus, the present study aims to assess the quality and level of contamination of the Lower Danube waters' water, sediment and fish fauna by determining the influence of anthropogenic and industrial activities in the area through the input of tributaries.

The study area of the measurements covered a perimeter with a total length of over 50 kilometers along the course of the Danube, starting from the vicinity of the municipality of Braila and up to the area of the city of Isaccea – Tulcea County.

In this purpose, pollution maps with the Water Quality Indicator (WQI) calculated based on physical-chemical parameters were carried out to highlight the contribution of each process in the seasonal dynamics and evaluate the Danube's self-purification capacity. The evaluations led to an estimate of the bioaccumulation factors that could coherently explain the values of the measurements obtained.

Keywords: bioaccumulation, water quality, sediment, fish fauna, pollution maps

Biography: Maria Catalina Topa completed her PhD in industrial engineering at 29 years from University "Dunarea de Jos" of Galati, Romania and postdoctoral studies from the same university in the field of environmental sciences. She is the head of Ecology laboratory within Rexdan Research Infrastructure and lecturer phd at the Faculty of Sciences and Environment from "Dunarea de Jos" University of Galati.

She has published more than 30 papers in reputed journals and participated with research papers in more than 20 international conferences in the field. Also has been serving as an expert and manager in many research projects funded by the European Union.